

METHOD OF PURIFYING EXHAUST GAS OF  
AN INTERNAL COMBUSTION ENGINE

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ABSTRACT OF THE DISCLOSURE

10 A NOx occluding and reducing catalyst 20 is provided  
in an exhaust gas passage of an engine to occlude the NOx  
in the exhaust gas of a lean air-fuel ratio. The engine  
is provided with an injector for directly injecting the  
fuel into the combustion chamber, and the fuel fed by a  
fuel pump into a common rail with pressure is injected.  
15 The additive containing a sulfur-solidifying agent that  
forms a solid sulfate upon the reaction with sulfur in  
the fuel due to combustion, is injected into the common  
rail from a tank due to a pump, and is supplied into the  
combustion chamber through the injector together with the  
20 fuel. When the condition of the atmosphere of the NOx  
occluding and reducing catalyst is the one where the NOx  
in the exhaust gas is little absorbed, the ECU adjusts  
the discharge amount of the pump, and decreases the  
amount of the additive injected into the common rail or  
25 interrupts the injection. This decreases the consumption  
of the sulfur-solidifying agent.